



# **ANNUAL REPORT**

**Fiscal Year 2019**

**July 1<sup>st</sup>, 2018  
to  
June 30<sup>th</sup>, 2019**

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# MISSION STATEMENT

*“ TO PROMOTE THE CONSERVATION AND IMPROVEMENT OF THE LAKE TAHOE BASIN’S NATURAL RESOURCES BY PROVIDING LEADERSHIP, EDUCATION AND TECHNICAL ASSISTANCE TO ALL BASIN USERS.”*

# VISION STATEMENTS

## Organization

*“TO BE A HIGHLY RESPECTED AND EFFECTIVE CONSERVATION ORGANIZATION IN THE LAKE TAHOE BASIN WITH SUFFICIENT AND SUSTAINED FUNDING TO MEET OUR CONSERVATION EFFORTS.”*

## Natural Resource

*“A NEVADA LAKE TAHOE BASIN WHERE NATURAL RESOURCES AND NATURAL BEAUTY ARE PROTECTED AND ENHANCED IN HARMONY WITH THE USE AND ENJOYMENT OF RESIDENTS AND VISITORS.”*

# **DISTRICT SUPERVISORS**

## **SUPERVISORS - EXECUTIVE COMMITTEE**

Glen Smith, Chair  
Doug Martin, Representing Carson City, Vice Chair  
Cary Sarnoff, Secretary/Treasurer

## **SUPERVISORS**

Maureen McCarthy, PhD  
Bob Cook  
Barbara Perlman-Whyman  
Marsha Berkgigler, Representing Washoe County  
Dave Nelson, Representing Douglas County

# **DISTRICT STAFF**

Meghan Kelly–District Manager/Senior Project Engineer  
Dana Olson – Assistant District Manager  
Domi Fellers – Environmental Scientist  
Monica Grammenos – Project Engineer

\*NTCD Board of Supervisors and Staff as of June 30<sup>th</sup>, 2019

# INTRODUCTION

The Nevada Tahoe Conservation District (NTCD) is one of approximately 3,000 Conservation Districts functioning in all 50 States and U.S. Territories. Conservation Districts are subdivisions of State government and are unique locally led conservation agencies. Districts provide resource management and technical assistance to land occupiers (owners, renters, and producers) as well as work cooperatively with Federal, State, and Local governments in the delivery of conservation programs.

The Nevada Tahoe Conservation District is one of 28 Conservation Districts functioning under the auspices of Nevada Revised Statute, Chapter 548. The District is a Governmental Subdivision of the State of Nevada and a public body corporate created in 1976. Prior to July 1<sup>st</sup>, 1976 the land area that now makes up the NTCD was part of a larger Conservation District known as the Tahoe Verdi Conservation District. Local leaders realized the unique natural resource issues of the Lake Tahoe Basin and realigned District boundaries to create the NTCD. They believed the realignment would allow for more effective conservation management of Lake Tahoe's natural resources. Now the District encompasses all of the land in the Lake Tahoe Basin residing in the State of Nevada including portions of Douglas and Washoe Counties and the Carson City Rural Area.

The Nevada Tahoe Conservation District is Nevada Lake Tahoe's local conservation agency and source for technical assistance in the areas of erosion and conservation management. The District is a non-regulatory and grant funded agency that works closely with its Federal, State, and Local partners to deliver conservation programs to the Nevada Lake Tahoe Community. The District is guided by a Board of Supervisors made up of elected and appointed community leaders. The Board of Supervisors provides direction to the District's full time staff in carrying out the District's mission statement, vision statements, and guiding principles. As described in our mission statement, the District seeks to provide its constituents with superior technical assistance, educational resources, and conservation leadership with the goal of protecting Lake Tahoe's natural resources.

# DISTRICT ADMINISTRATION AND OPERATIONS

Included in our accomplishments during the past year was the completion of the FY 2017 audit. The audit showed a financial outlook for the District which continues to reflect a financial position of accountability. Internal controls are in place to ensure the solvency of the District's funds.

The District submitted its Indirect Cost Rate with the Department of the Interior for the year 2019. The rate was approved in July 2019. The late approval was due to the government shut down in January 2019.

Other administration and operations accomplishments for fiscal year 2019:

- Successfully held eight regular board meetings.
- Participation in national and state conservation programs.
- The FY 2018 audit was completed with no findings.
- Successfully met all deliverable requirements of the Conservation Commission.
- District Staff and Supervisors continued to provide support for the NvACD.

# PROJECT UPDATES

## WATER QUALITY AND EROSION CONTROL PROJECTS

Scientists, researchers, and water quality specialists in the Lake Tahoe Basin have identified untreated storm water runoff, eroding soils, and impaired or disturbed stream environment zones (SEZ) as key threats to the water quality of Lake Tahoe. The District is focused on identifying and correcting areas where point and non-point source pollution from stormwater runoff, eroding soils, and impaired SEZs are negatively impacting the quality of Nevada Lake Tahoe surface and ground waters.

In partnership with the Nevada Division of State Lands (NDSL), Nevada Division of Environmental Protection (NDEP), Tahoe Regional Planning Agency (TRPA), the US Forest Service Lake Tahoe Basin Management Unit (USFS), the US Bureau of Reclamation (USBOR) jurisdictions such as the Nevada Department of Transportation (NDOT) and Douglas and Washoe County, as well as other basin agencies, the District identifies and prioritizes critical areas and projects. Once projects have been identified, the District works diligently to assist project proponents in obtaining funding from federal, state, local and private sources to design and construct the projects. During project design, the District, its grantors, and a project-specific Technical Advisory Committee provide technical oversight to ensure the project meets the natural resource, water quality, and community objectives of for the specific project and the region.

NTCD continues working on several Water Quality and Restoration Projects with NDSL, NDOT, TRPA, Douglas and Washoe County, U the US Forest Service and USBOR. The cooperative effort between these agencies has led to several design and implementation projects including the Rosewood Creek Restoration Project, the Kahle Water Quality Basin Project, and the Pittman Terrace Water Quality Improvement Project.

### **Rosewood Creek Restoration Project - Continuation**

The purpose of the Rosewood Creek Restoration Project - Continuation is to continue to stabilize portions of the Third Creek watershed to reduce sediment loads to Lake Tahoe as well as expand healthy riparian areas. Nearly a half mile of creek was restored as part of a project completed in October 2015. A new project was authorized by the Bureau of Reclamation to address a 400 foot section of creek just downstream from this restored reach. Design started on this reach in May 2017 and construction is occurring in September and October 2019. Monitoring is ongoing through FY 2021 to determine the project's contribution to water quality improvements.



**New channel, culvert, and floodplain at Rosewood Creek Area A SEZ Restoration continues to undergo monitoring**

### **2018-2019 Pittman Terrace Water Quality Improvement Project**

This project is a partnership with NTCD, NDOT, Douglas County and the Pittman Terrace neighborhood to implement water quality and erosion control improvements in the Pittman Terrace community to address NDOT runoff generated from HWY 50. Funding is through NDEP, NDSL and NDOT. Funding was secured from all partners in April 2017. Final design was completed in May 2018 and the project was publicly bid and a qualified best value bidder was selected and approved by the NTCD board and project funders. The project was constructed in Summer/Fall 2018 and final revegetation was completed in Spring 2019. All project funds have been expended and project is considered complete.



**Rock lined channel with infiltrating drop structures and block channel leading to micro-basin.**

### **Kahle Water Quality Implementation Project**

This project had been on Douglas County's priority list for a number of years and was specifically identified in the 2014 Burke Creek Rabe Meadow Master Plan by NTCD. Leftover USFS SNPLMA funding from the Burke Creek Crossing and Realignment Project was moved to this project and match was secured from Douglas County TRPA Mitigation Funds, NDOT, and NDSL to design and install this \$1.4 million dollar project which included 1400' of storm drain

pipe and large wet basin. Both treatments are appropriately sized for the design storm in the area and have resulted in considerable improvements to water quality. NTCD designed, permitted and bid the project with internal staff and construction of the project was completed in October 2018. The District conducted visual monitoring of vegetation success during the field season of 2019 and plans to close out the project this year.

### **Johnson Meadows Assistance**

NTCD engineers assisted the Tahoe Resource Conservation District with some preliminary planning on their recently acquired Johnson Meadows reach of the Upper Truckee River. The District provided options for reconnecting a washed out pedestrian bridge and stabilizing nearby banks and preventing further erosion.

### **NDOT Assistance**

NTCD engineers assist NDOT Hydraulics with stormwater-related issues on Tahoe Basin highways upon request. NTCD engineers perform site visits, hydrology, conceptual designs, order necessary materials, and coordinate with a construction contractor, permitting agencies, and NDOT to implement the projects. NTCD has also prepared a training for NDOT Maintenance staff for best practices for TMDL compliance in the Lake Tahoe Basin and is conducting an outfall inventory to inform future maintenance projects.

### **Douglas County Assistance**

NTCD engineers assist Douglas County Public Works with stormwater-related issues upon request from the Stormwater Program Manager. NTCD engineers perform site visits, hydrology, cost estimates, and conceptual designs and present this work to the County for use. NTCD also provides oversight of the County's Stormwater Maintenance Crew as requested. A portion of this funding assists the District with finding and applying for grants or other funding sources for priority County projects.

### **Bijou Park Creek Watershed Restoration Project**

NTCD teamed up with consultants including Wildscape Engineering, Northwest Hydraulic Consultants, and Catalyst Environmental Solutions to complete this planning project for the City of South Lake Tahoe that will advance stormwater collection and treatment designs in the Bijou Park Creek Watershed. NTCD is assisting the team with TMDL modeling and conceptual engineering design.

### **Private Glenbrook Road Drainage Design**

NTCD engineers prepared a design to remedy groundwater issues on Glenbrook Road on private property at the request of two adjacent landowners. The project was funded by private landowners and involved installing a subterranean infiltration and conveyance system.

### **Wildscape Assistance**

A modification to the subcontract between NTCD and Wildscape Engineering, Inc. (Wildscape) for Support Services was signed in February 2019. The modification included engineering assistance. This was an expansion on the contract for Water Pollution Control Services including construction inspection and marina monitoring work completed in the summer of 2017. The timeframe for Water Pollution Control and Engineering Assistance was extended to December 31, 2020. NTCD provided professional engineering services to Wildscape on an as

needed, agreed to basis for various Wildscape clients. Work completed included engineering design, engineering review, drafting, and field consultations.

## **MONITORING AND MODELING PROJECTS**

NTCD's environmental monitoring program is designed to provide answers to the scientific and natural resource questions of Lake Tahoe's resource managers. The program delivers these answers by the following means:

- Evaluation of environmental restoration projects
- Inventory of Basin-wide project accomplishments
- Inventory of Nevada's stormwater assets
- NDEP compliance monitoring
- Stream health and water quality
- Advanced stormwater treatment analysis
- Pollutant Load Reduction Modeling
- Sediment Load Reduction Planning

### **Lake Clarity Crediting Program Registration & TMDL Implementation**

The Lake Clarity Crediting Program Registration and TMDL Implementation project provides support to Washoe County and NDOT to comply with their individual Interlocal Agreements with NDEP. The ILAs document the specific obligations and commitments of attaining the load reduction milestones associated with the Lake Tahoe TMDL using the Lake Clarity Crediting Program (LCCP) Tools. The project will assist Washoe County and NDOT in meeting the 2021 load reduction milestone and reaching for the 15 year 2026 milestone by registering pollutant controls such as stormwater treatment BMPs, private parcel BMPs and road operations. Registrations and credit attainment show commitment to the TMDL goal of improving Lake clarity. The project will review existing and create new PLRM models as needed and refine inputs, perform the required rapid assessment methodology (RAMs), help determine inspection and maintenance frequency for specific treatment BMPs, register the catchments in the Lake Tahoe Stormwater tools and obtain awarded credits. Additional, NTCD participates in program improvements meetings and program advisory committees since LCCP is based on an adaptive management approach.

### **Caltrans LCCP Support**

NTCD performs the Road RAM for Caltrans on an annual basis. To comply with the Lake Clarity Crediting Program, Caltrans must perform Road RAM a minimum of four (4) times annually, with the option to perform additional RAMs if directed by Caltrans or CDM Smith. NTCD collects the field data, prepares the data for entry into the Lake Tahoe Stormwater Tools, records the data in NTCD's excel worksheet, scans all field data sheets and turns the data over to CDM Smith and Michael Baker International for review and data entry into Lake Tahoe Stormwater Tools.

### **Rosewood Creek Water Quality Monitoring**

NTCD received additional funding to continue monitoring on Rosewood Creek with the goal of quantifying the restoration's impact on meeting the Tahoe TMDL. The sampling systems above Northwood Blvd. and below SR28 continue to be operational and are monitoring Rosewood Creek flow above and below the Area A restoration. With the new funding, an additional monitoring station above SR28 was installed to separate the impact of SR28 road runoff. These

efforts continued through FY 2017 with the current grant and through FY 2021 with a new grant recently awarded.

### **TRCD RSWMP/NDOT-**

A pollutant source analysis conducted by the Lahontan Regional Water Quality Control Board (Water Board) and Nevada Division of Environmental Protection (NDEP) identified the largest source of fine sediment particles to Lake Tahoe as urban stormwater runoff, comprising 72 percent of the total fine sediment particle load. Based on the pollutant source analysis, seven jurisdictions determined as Lake Tahoe stormwater dischargers, were issued a National Pollutant Discharge Elimination System permit (permit) by the Water Board in August 2011. The Nevada jurisdictions including NDOT entered into Inter-local Agreements (ILAs) with NDEP shortly after, that required them to reduce pollutant loads to Lake Tahoe from urbanized areas within their jurisdictions. The permits and ILAs encouraged the jurisdictions to work collaboratively to fulfill the regulatory requirements. The seven (7) jurisdictions have since then partnered together to form the Implementers' Monitoring Program (IMP), a coordinated effort for implementing capital improvement projects and improving management actions to reduce pollutant loads to Lake Tahoe to meet the TMDL standard. The Tahoe Resource Conservation District (Tahoe RCD) was hired by both the IMP and NDOT to establish a coordinated network of long-term monitoring sites for collecting reliable information on urban stormwater runoff to track pollutant load reduction progress under the Lake Tahoe TMDL using RSWMP protocols. These sites provide critical information related to changes in stormwater quality status and trends in response to implementing water quality improvement projects and improved management actions in urban catchments. The Tahoe RCD has contracted with NTCD provided water quality monitoring and lab work assistance to the Tahoe RCD for work contracted by Lake Tahoe jurisdictions. The NTCD/Tahoe RCD contract is renewed on an annual basis.

### **HWY 50 Loop Road Bypass**

NTCD performed the baseline, existing condition and proposed condition Pollutant Load Reduction Modeling (PLRM) for the US 50/South Shore Community Revitalization Project which intends to reroute US 50 around the backside of the casino corridor along the existing Lake Parkway East. NTCD gathered existing data and met with multiple agencies (Caltrans, NDOT, City of South Lake Tahoe, Tahoe Transportation District and Wood Rodgers Consulting) to understand the project better. NTCD generated a Technical Memo summarizing the PLRM results for the Tahoe Transportation District.

### **Lower Wood Creek Water Quality Monitoring**

NTCD is the lead Pollutant Load Reduction Model (PLRM) modeler for the Lower Wood Creek (LWC) Phase I Water Quality Improvement Project. NTCD provided preliminary PLRM data to Washoe County and the consultant, NCE. After reviewing the data, all parties participated in a field visit to discuss discrepancies and refine the baseline and existing condition GIS shapefile PLRM inputs files. NDEP approved the GIS shapefiles adjustments which should save time when the project is ready for LT Info Registration. NTCD refined the baseline and existing condition PLRM using the updated GIS shapefile data and provided Washoe County and NCE the final results and files. NTCD completed the Baseline and Existing Conditions Technical Memo documenting all PLRM and GIS shapefile refinements. Using the existing conditions data, NCE designed treatment BMP alternatives for priority stormwater areas and NTCD performed PLRM for the BMP alternatives. NTCD is currently working on the Alternatives

Technical Memo documenting all PLRM and GIS shapefile refinements for the design treatment BMPs alternatives. The LWC Water Quality Improvement Project is on a fast track for construction in 2022 with BMP Registration by Water Year 2023.

### **2018 Nearshore Human Health Assessment**

The Tahoe Regional Planning Agency (TRPA) and Lahontan Regional Water Quality Control Board (Lahontan) collaborated in 2018 to execute a Nearshore Human Health Assessment for Lake Tahoe. The assessment included Fecal Indicating Bacteria (FIB), (which include total coliform, *Escherichia coli* (*E. coli*), and fecal coliform), and cyanotoxins, which can be produced during Harmful Algal Blooms (HAB) of organisms such as cyanobacteria. The Nevada Tahoe Conservation District (NTCD), in partnership with the Tahoe Resource Conservation District (Tahoe RCD) and Desert Research Institute (DRI), were contracted on July 11, 2018 to implement water quality sampling in the summer of 2018 and to produce several documents including the Nearshore Human Health Monitoring Report as an assessment of human health risks associated with lake-water contact during recreational activities. The project was completed under budget by December of 2018.

### **2019 Shoreline Human Health Water Quality Monitoring**

The Tahoe Regional Planning Agency (TRPA) and the Nevada Division of Environmental Protection (NDEP) collaborated in 2019 to execute a Shoreline Human Health Water Quality Monitoring for Lake Tahoe, which is an extension of the 2018 Nearshore Human Health Assessment based on recommendations made by NTCD and project team in 2018. The project was contracted on June 4, 2019 to the Nevada Tahoe Conservation District (NTCD), in partnership with the United States Geological Survey (USGS), Tahoe Resource Conservation District (Tahoe RCD) and Desert Research Institute (DRI). The monitoring included Fecal Indicating Bacteria (FIB), (which include total coliform, *Escherichia coli* (*E. coli*), and fecal coliform), and fuel constituents (which include BTEX: benzene, toluene, ethylbenzene, and xylene, and polycyclic aromatic hydrocarbons (PAH)). In the next fiscal year, the project team will author a Sampling and Analysis Plan based on prior monitoring as well as perform the monitoring. Final results will be given in field sheets and lab reports only. No final report will be generated.

### **Urban Agriculture Project**

The National Association of Conservation Districts funded a project to promote urban agriculture in the schools surrounding South Lake Tahoe. This project supported technical assistance for the budding school garden program. A greenhouse was built at Bijou Elementary School and one is also being constructed at the Lake Tahoe Environmental Magnet School. These greenhouses are aimed to increase experiential learning and incorporate STEAM curriculum at the schools. Along with infrastructure, a school garden committee was formed under the South Tahoe Environmental Education Coalition to unify and guide the different garden programs at the schools. There is also a partnership being created with Zephyr Cove Elementary School to erect two growing domes. This work is being completed with help from private funds secured from Lisa Maloff.

### **Invasive Weeds**

The District, in partnership with the Lake Tahoe Basin Weed Coordinating Group (LTBWCG), secured a grant with the Tahoe Fund to reprint the Lake Tahoe Invasive Weed Booklet. This

booklet is an update of the 2004 booklet. This reprint adds new species of concern, and improves the relevancy of information included. The District also continues to be involved with the LTBWCG by attending to quarterly meetings.

### **Tahoe Yellow Cress**

The NTCD attended quarterly Tahoe yellow cress meetings. This fiscal year, the District had limited funding for outreach and education efforts to inform lake front homeowners about Tahoe Yellow Cress. It did continue to work with partners on a Safe Harbor Agreement application in hopes to develop a program to improved conservation of Tahoe yellow cress on private properties.



**Tahoe Yellow Cress**

## **COMMUNITY PARTNERSHIPS**

During Fiscal Year 2019, funding was provided by Washoe County. This funding has been essential to NTCD operations. The general fund funding provided by Douglas and Washoe County enables NTCD to leverage a small amount of funding into larger projects. General fund assistance is critical for activities like grant writing and project planning and a consistent long term commitment is desired.

### **Douglas County Board Of Commissioners**

NTCD did not receive any general financial assistance this fiscal year. This was due to the fact that the Board of Douglas County Commissioners gave an additional \$25,000 last year as requested by the District. Douglas County also provides NTCD with legal support through its District Attorney's office.

### **Carson City Board Of Supervisors**

Although there are very few developed areas within the Carson City Rural Area, the Board of Supervisors has recognized the benefits of protecting Lake Tahoe Basin natural resources, for the thousands of residents and visitors who vacation and recreate in the basin.

## **Washoe County Board Of Commissioners**

NTCD received \$15,000 from Supervisor Marsha Berkbigler's funds to support the District's conservation efforts. Washoe County continues to partner with NTCD on various projects in the Lake Tahoe Basin including the Catchment Registration Projects.

## **Other Partners**

NTCD is involved in several other partnerships in addition to our Community Partnerships. During FY 2019, NTCD has Memorandums of Understanding or contracts with the USDA Natural Resources Conservation Service, the Nevada Division of Environmental Protection, the Nevada Division of State Lands, Tahoe Resource Conservation District, Nevada Department of Transportation, and the Tahoe Regional Planning Agency. We are fortunate to have such a diverse and engaged group of partners who are dedicated to natural resource issues at Lake Tahoe.

Working groups are also an important partnership NTCD is actively involved with. Our current participation includes:

- Lake Tahoe Interagency Monitoring Program
- South Tahoe Environmental Education Coalition
- Lake Tahoe Basin Weed Coordinating Group
- Stormwater Quality Improvement Committee
- Nevada Tahoe Water Suppliers Association
- TRPA Pathway Technical Working Groups
- TRPA Pathway Forum
- Lake Tahoe Federal Advisory Committee
- Nevada Stormwater Association
- Tahoe Interagency Executive Committee
- Washoe Tribe of Nevada
- University of Nevada Cooperative Extension
- Parasol Foundation
- Tahoe Yellow Cress Adaptive Management Working Group and Executive Committee.

# **FUNDING**

Nevada Tahoe Conservation District funding during FY 2019 was provided by Local, State and Federal partners including:

## **LOCAL**

Washoe County  
Douglas County  
Tahoe Resource Conservation District  
Tahoe Regional Planning Agency  
City of South Lake Tahoe  
Tahoe Transportation District

## **FEDERAL**

USDA Bureau of Reclamation  
USDA Forest Service

## **STATE**

NV Division of Conservation Districts  
NV Division of Environmental Protection  
NV Division of State Lands  
NV Department of Transportation  
California Department of Transportation

## **PRIVATE**

Tahoe Fund  
National Association of Conservation Districts  
Wildscape Engineering, Inc.  
Glenbrook Private Homeowners

A comprehensive overview of the District's finances is available in our FY 2019 annual audit. A copy of which is available at the district.